



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/941,655

08/30/2001

Hiroshi Kanazawa

381KA/50358

7423

7590

12/05/2003

CROWELL & MORING LLP  
INTELLECTUAL PRPOERTY GROUP  
P.O. BOX 14300  
Washington, DC 20044-4300

EXAMINER

ELKASSABGI, HEBBA

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 12/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/941,655

Applicant(s)

KANAZAWA ET AL.

Examiner

Heba Elkassabgi

Art Unit

2834

-- **Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08/26/2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09941655, filed on 08/30/2001.

### ***Drawings***

Drawing objections in non-final office action on 03/27/2003, is withdrawn in light of applicants remarks filed on 08/26/2003.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claim limitation of claim 1 and 7, "in contact with the whole of the magnet pole surface of said permanent magnet", must be shown or the features canceled from the claims. No new matter should be entered. The drawings filed on 08/30/2001, illustrates in only figure 10 a magnet (7) being fully enclosed by magnetic pole plate (23) and magnetic cover (26A).

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

Claims 1 and 7 rejection under **35 USC § 112**, first paragraph in non-final office action on 03/27/2003, is withdrawn in light of applicants remarks filed 08/26/2003.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Kusase et al. U.S. Patent 5483116.

Kusase et al. discloses in Figure 1 a rotating electric machine comprising a rotor (3), stator (2), a stator coil (5) over a stator core (4), with the rotor having a pair of claw-type magnetic poles (15 and 16) placed in alternative directions and in contact with the whole of the magnetic pole surface of the permanent magnet, in which the permanent magnets (11) surface have a rectangular lateral surface that face the rotor (3) in the circumferential direction. A permanent magnet (11) is placed close to a pair of claw-type magnetic poles with the field coils (8) placed radially internally within the claw-type magnetic poles. Kusase et al., further illustrates in Figure 3, the auxiliary magnetic pole portion (AA) in contact with the whole of the magnetic pole surface (BB) of the permanent magnet (11), with the auxiliary magnetic pole portion has a greater width (CC) in the radial outer side of the rotor than the inner side. The inner surface (DD) of

Art Unit: 2834

the claws in the radial direction of the rotor is parallel to an outer surface of the rotor, with the claws (15) interconnected by a ring-shape member (25); in addition the claws have a magnet holding portion (AA). Including that the opposing surfaces (OP) of the claw poles (15 and 16) are adjacent the permanent magnets (11), in which the permanent magnets (11) form into substantially the same shape as the magnetic pole surface (OP) which they are in contact with. Furthermore, Figure 8 discloses a protective covering (PC) on the radial direction of the outer side of the permanent magnet.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kusase et al. U.S. Patent 5483116 and further in view of Ragaly J.P. Application 11285214.

Kusase et al. discloses in Figure 1 a rotating electric machine comprising a rotor (3), stator (2), a stator coil (5) over a stator core (4), with the rotor having a pair of claw-type magnetic poles (15 and 16) placed in alternative directions and in contact with the whole of the magnetic pole surface of the permanent magnet, and that the permanent magnets face the rotor in a circumferential direction and have rectangular lateral

Art Unit: 2834

surfaces. A permanent magnet (11) is placed close to a pair of claw-type magnetic poles with the field coils (8) placed radially internally within the claw-type magnetic poles. Furthermore, the opposing surfaces (OP) of the claw poles (15 and 16) are adjacent the permanent magnets (11), in which the permanent magnets (11) form into substantially the same shape as the magnetic pole surface (OP) which they are in contact with. Additionally, Figure 2 indicates a claw poles (15 and 16) having claws that are tapered toward their tips in a substantially triangular shape in a section along an axial direction of the rotor. However, Kusase et al. does not divulge an auxiliary magnetic pole plate with a magnet-holding portion placed between a plurality of claws and permanent magnet, with the auxiliary magnetic pole plate contacting the whole of the magnetic pole surface of the permanent magnet.

Ragaly illustrates in Figure 16, magnetic pole plates (m2 and m3) in contact with the whole of the permanent magnet (m1) placed between a pluralities of claws (GG). In addition that the auxiliary magnetic pole plate (m2 and m3) have a magnet holding portion (HH) for the permanent magnet (m1), for the purpose of improving the permanent magnet holder and simplifying construction and lower manufacturing coast.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Kusase et al. by adding the magnetic pole plate between the claws and amid the permanent magnet, with the magnet-holding portion in contact with the pole plate, per Ragaly since this would have been desirable in order to

improve the permanent magnet holder and simplifying construction and lower manufacturing cost.

### ***Response to Arguments***

Applicant's remarks have been considered and are not persuasive. In response to applicant's remarks that in both claims 1 and 7 neither Kusase et al. nor Ragaly address the claim limitation of the claws "in contact with the whole of the magnet pole surface of said permanent magnet" or that the "opposing surfaces of the claws adjacent the permanent magnets are formed into substantially the same shape as the magnetic pole surfaces with which they are in contact," the examiner respectfully disagrees with applicant's remarks. Kusase et al. clearly illustrates in figures 8 and 12, a magnet (11) that is contact with the whole of the magnet pole surface, which is fully enclosed by a magnet holder (12). Additionally, Kusase et al. and Ragaly illustrate that the claws (15 and 16, Kusae et al) and (M2 and M3 and 7) are **substantially the same shape as the magnetic pole surface with which they are in contact**. The term "substantially", as defined by Merriam-Webster's dictionary means, "being largely but not wholly". Thus, with regards to the limitations of claims 1 and 7, the claw poles are largely in contact with the magnet but not necessarily entirely in contact with the magnet.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heba Elkassabgi whose telephone number is (703) 305-2723.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Burt Mullins can be reached on (703) 305-7063. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Heba Y. Elkassabgi

  
BURTON S. MULLINS  
PRIMARY EXAMINER